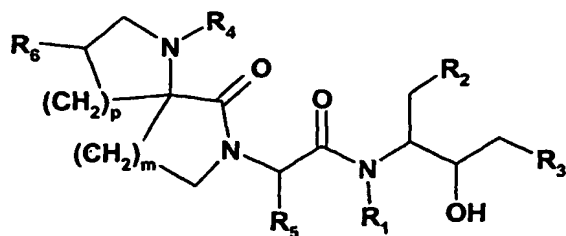


Claims

1. A compound of the formula



wherein

R_1 is hydrogen or (C_{1-4}) alkyl,

R_2 is optionally substituted (C_{1-8}) alkyl, (C_{3-7}) cycloalkyl, (C_{3-7}) cycloalkyl (C_{1-4}) alkyl, aryl or heteroaryl,

R_3 is $-\text{CH}(R_e)\text{C}(=\text{O})\text{N}(R_a)R_b$ or $-(\text{CH}_2)_k\text{N}(R_c)R_d$, wherein

k is 0, 1 or 2,

R_a , R_b , R_c and R_d , independently, are hydrogen or an optionally substituted (C_{1-8}) alkyl, (C_{5-9}) bicycloalkyl, (C_{3-7}) cycloalkyl, (C_{3-7}) cycloalkyl (C_{1-4}) alkyl, aryl, aryl (C_{1-4}) alkyl, heteroaryl, heteroaryl (C_{1-4}) alkyl, 4-chromanyl, 1,2,3,4-tetrahydro-quinolin-4-yl, 1,2,3,4-tetrahydro-naphthalen-1-yl, thiochroman-4-yl-1,1-dioxide, 4-isochromanyl, 1,2,3,4-tetrahydro-isoquinolin-4-yl, thioisochroman-4-yl-1,1-dioxide, 1,1-dioxo-1,2,3,4-tetrahydro-1 λ^6 -benzo[e][1,2]thiazin-4-yl, 1,1-dioxo-3,4-dihydro-1H-1 λ^6 -benzo[c][1,2]oxathiin-4-yl, 2,2-dioxo-1,2,3,4-tetrahydro-2 λ^6 -benzo[c][1,2]thiazin-4-yl or 2,2-dioxo-3,4-dihydro-2H-2 λ^6 -benzo[e][1,2]oxathiin-4-yl group, or

R_a and R_b , or R_c and R_d , together with the nitrogen to which they are attached, form an optionally substituted pyrrolidinyl, piperidinyl, morpholinyl or piperazinyl group, and

R_e is (C_{1-8}) alkyl, (C_{1-4}) alkoxy (C_{1-4}) alkyl, (C_{3-7}) cycloalkyl or (C_{3-7}) cycloalkyl (C_{1-4}) alkyl,

R_4 is hydrogen or an optionally substituted (C_{1-8}) alkyl, (C_{1-4}) alkoxy (C_{1-4}) alkyl, (C_{3-7}) cycloalkyl, (C_{3-7}) cycloalkyl (C_{1-4}) alkyl, (C_{2-6}) alkenyl, (C_{2-6}) alkynyl, (C_{3-7}) cycloalkoxy (C_{1-4}) alkyl or aryl group,

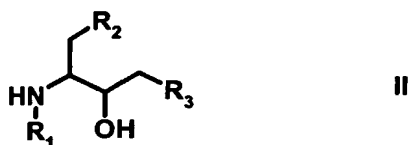
R_5 is hydrogen or optionally substituted (C_{1-4}) alkyl,

R_6 is hydrogen, hydroxy or halogen, and

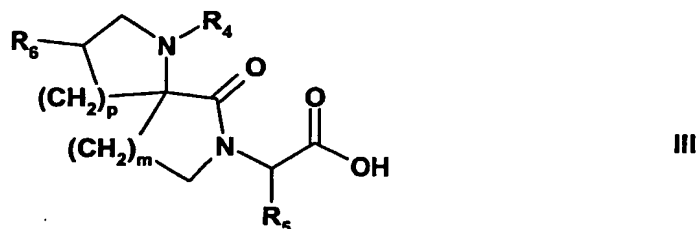
m and p , independently, are 1 or 2,

in free base form or in acid addition salt form.

2. A process for the preparation of a compound as defined in claim 1 of the formula I, in free base form or in acid addition salt form, comprising the steps of acylating a compound of the formula



wherein R_1 , R_2 and R_3 are as defined for the formula I, with an acid of the formula



wherein R_4 , R_5 , R_6 , m and p are as defined for the formula I, or an activated form, such as an ester or an acid halogenide, thereof and recovering the so obtainable compound of the formula I in free base form or in acid addition salt form.

3. A compound according to claim 1, in free base form or in pharmaceutically acceptable acid addition salt form, for use as a pharmaceutical.

4. A compound according to claim 1, in free base form or in pharmaceutically acceptable acid addition salt form, for use in the treatment of neurological or vascular disorders related to beta-amyloid generation and/or aggregation.

5. A pharmaceutical composition comprising a compound as claimed in claim 1, in free base form or in pharmaceutically acceptable acid addition salt form, as active ingredient and a pharmaceutical carrier or diluent.

6. The use of a compound as claimed in claim 1, in free base form or in pharmaceutically acceptable acid addition salt form, as a pharmaceutical for the treatment of neurological or vascular disorders related to beta-amyloid generation and/or aggregation.

7. The use of a compound as claimed in claim 1, in free base form or in pharmaceutically acceptable acid addition salt form, for the manufacture of a medicament for the treatment of neurological or vascular disorders related to beta-amyloid generation and/or aggregation.

8. A method for the treatment of neurological or vascular disorders related to beta-amyloid generation and/or aggregation in a subject in need of such treatment, which comprises administering to such subject a therapeutically effective amount of a compound as claimed in claim 1, in free base form or in pharmaceutically acceptable acid addition salt form.

9. A combination comprising a therapeutically effective amount of a compound as claimed in claim 1, in free base form or in pharmaceutically acceptable acid addition salt form, and a second drug substance, for simultaneous or sequential administration.

10. The use of a compound as claimed in claim 1, in free base form or in pharmaceutically acceptable acid addition salt form, as histopathological labeling agent, imaging agent and/or biomarker for the selective labeling of the beta-secretase cleaving enzyme BACE.